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PATENT
138543 (553-1077)

IN THE DRAWINGS:

Attached are two replacement sheets that replace originally filed sheets 1 and 4. No new matter has been added.

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Remarks

Claims 6, 7, 9, 14, 24, 26, and 27 are currently pending in this Application. Claims 6, 7, 9, 14, 24, 26, and 27 stand rejected. Claims 14 and 24 have been cancelled herein. Claims 6, 7, 9, 26, and 27 will be pending in this Application upon entry of this Amendment.

With respect to the objection to the drawings under 37 C.F.R. 1.83(a), Figure 1 has been amended to show that the scan converter and display controller 16 includes the speckle reduction filter. Figure 6 has been amended to show that the memory 116 includes the speckle reduction filter, and to indicate that the CPU 112 is a single instruction-stream, multiple data-stream (SIMD) CPU. Attached hereto are two replacement sheets that replace originally filed sheets 1 and 4. No new matter has been added to the Application. Accordingly, Applicant requests that the objection to the drawings be withdrawn.

Claim 9 has been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,619,998 (Abdel-Malek) in view of U.S. Pat. No. 6,879,729 (Kamath). Claims 6, 7, 26, and 27 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Abdel-Malek in view of Kamath, and further in view of U.S. Pat. No. 6,674,879 (Weisman). Claim 14 has been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. Application No. 10/081542 (Grunwald) in view of Abdel-Malek, and further in view of Kamath. Claim 24 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Abdel-Malek in view of Kamath, and further in view of "SIMD Processor Arrays for Image and Video Processing: A Review" (Le). Applicant traverses these rejections for at least the reasons set forth hereafter.

Claim 6 recites a method for implementing a speckle reduction filter comprising "receiving a processed data stream from a processor...dividing the processed data stream into data subsets...simultaneously filtering the data subsets by using a speckle reduction filter to produce filtered data subsets...and producing an image data stream based on the filtered data subsets, wherein the filtering step is based on adjustable parameters, the method further comprising...changing values of the parameters between first and second value sets to form a first and second image data streams...and simultaneously co-displaying a first image and a second image on a common screen, wherein the first image is generated from the first image data stream, and wherein the second image is generated from the second image data stream, and

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further wherein the first image and the second image are speckle-reduced images using parameters of the first value set and parameters of the second value set, respectively."

None of Abdel-Malek, Kamath, and Weisman, considered alone or in combination, describe a method as recited in claim 6. For example, none of Abdel-Malek, Kamath, and Weisman, considered alone or in combination, describe simultaneously filtering data subsets by using a speckle reduction filter to produce filtered data subsets, wherein the filtering step is based on adjustable parameters, changing values of the parameters between first and second value sets, and simultaneously co-displaying a first image and a second image on a common screen, wherein the first image and the second image are speckle-reduced images using parameters of the first value set and parameters of the second value set, respectively.

The Office has admitted that Abdel-Malek and Kamath do not disclose simultaneously co-displaying filtered images on a common screen. Instead, the Office has relied on Weisman to provide the simultaneous co-display of filtered images. On page 5 of the outstanding Final Office Action, it is asserted that "Weisman shows four images that are simultaneously co-displayed on a common screen, one of which is the raw image" and "[t]he other three images are speckle reduced images that are generated from different sets of parameters and are simultaneously co-displayed on a common screen." Weisman illustrates a quad display of a captured echocardiogram raw data image, a speckle reduced image, an edge detected image, and a color quantization of the movement of the image during the heart cycle along with a patient information screen. However, as noted by the Examiner on pages 5 and 6 of the outstanding Final Office Action, the edge detected image and the color quantization image are generated from edge detection parameters and color quantization parameters, respectively, that are applied to the same speckle reduced image. Accordingly, the edge detected and color quantization images are not images that are generated from different speckle-reduction parameters, rather both the edge detected and color quantization images are generated from the same speckle-reduced image. In contrast, claim 6 recites changing the values of the parameters of the speckle reduction filter between first and second value sets, and co-displaying first and second images that are speckle-reduced using the parameters of the first and second value sets, respectively. In view of the above, Weisman does not describe co-displaying first and second images that are speckle-reduced using the parameters of different first and second value sets.

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Because Abdel-Malek, Kamath, and Weisman individually fail to describe or suggest one or more elements of claim 6, it follows that a combination of Abdel-Malek, Kamath, and Weisman cannot describe or suggest such element(s). For at least the reasons set forth above, claim 6 is submitted to be patentable over Abdel-Malek in view of Kamath, and further in view of Weisman.

Claim 7, as amended, recites a method for implementing a speckle reduction filter comprising, among other things, "enabling a user to enter the dual display mode at least one of during a scan and while a replay of pre-recorded cine loops is displayed on a screen."

None of Abdel-Malek, Kamath, and Weisman, considered alone or in combination, describe a method as recited in claim 7. For example, none of Abdel-Malek, Kamath, and Weisman, considered alone or in combination, describe enabling a user to enter a dual display mode at least one of during a scan and while a replay of pre-recorded cine loops is displayed on a screen. On page 13 of the outstanding Final Office Action, the Office relies on Weisman to describe the step of "enabling a user to enter the dual display mode while a still image that is not updated periodically is displayed on the screen...." However, claim 7 has been amended to remove the reaction of "while a still image that is not updated periodically is displayed on the screen." Weisman does not describe enabling a user to enter a dual display mode at least one of during a scan and while a replay of pre-recorded cine loops is displayed on a screen, as is recited in amended claim 7.

Because Abdel-Malek, Kamath, and Weisman individually fail to describe or suggest one or more elements of claim 7, it follows that a combination of Abdel-Malek, Kamath, and Weisman cannot describe or suggest such element(s). For at least the reasons set forth above, claim 7 is submitted to be patentable over Abdel-Malek in view of Kamath, and further in view of Weisman.

Claim 9, as amended, recites a method for implementing a speckle reduction filter comprising, among other things, "simultaneously filtering the data subsets by using a speckle ~~reduction filter to produce filtered data subsets...~~and producing an image data stream based on the filtered data subsets, wherein the filtering step is based on adjustable parameters, the method

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further comprising...automatically, without user intervention, optimizing the parameters based on a scan of an imaging system and what is being imaged.

Neither Abdel-Malek nor Kamath, considered alone or in combination, describe a method as recited in claim 9. For example, neither Abdel-Malek nor Kamath, considered alone or in combination, describe automatically, without user intervention, optimizing the parameters of a filtering step based on what is being imaged. The Office relies on Abdel-Malek to provide "optimizing the parameters based on an application" (Page 4 of the outstanding Final Office Action). Specifically, the Office relies on optimizing parameters based on a wavelet transformation, as discussed in column 6 of Abdel-Malek, communication requirements, or denoising techniques. However, claim 9 has been amended to replace "optimizing the parameters based on an application" with "optimizing the parameters based on...what is being imaged." The wavelet transformation, communication requirements, and denoising techniques of Abdel-Malek do not provide a basis for what is being imaged. Accordingly, Abdel-Malek does not describe automatically, without user intervention, optimizing the parameters of a filtering step based on what is being imaged.

Because Abdel-Malek and Kamath individually fail to describe or suggest one or more elements of claim 9, it follows that a combination of Abdel-Malek and Kamath cannot describe or suggest such element(s). For at least the reasons set forth above, claim 9 is submitted to be patentable over Abdel-Malek in view of Kamath.

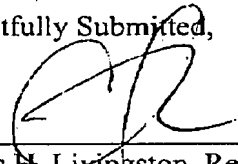
Independent claims 26 and 27 are submitted to be patentable over Abdel-Malek in view of Kamath, and further in view of Weisman for at least the reasons set forth herein with respect to independent claim 6.

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In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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